AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An antigen-based heteropolymer (AHP) comprising (a) a monoclonal antibody that specifically binds a complement receptor (CR1) site on a primate erythrocyte, and (b) an antigen specific for a target pathogenic antibody or autoantibody, wherein said monoclonal antibody is crosslinked to [[an]] said antigen ~~specific for a target pathogenic antibody or autoantibody~~.

2. (Canceled).

3. (Currently Amended) The AHP of Claim 1, wherein the target antibody or autoantibody is selected from the group consisting of antibodies or autoantibodies to the following antigens: factor VIII, muscle acetylcholine receptor, cardiolipin, platelet associated proteins, antigens associated with Sjogren's Syndrome, double stranded deoxyribonucleic acid (dsDNA), ~~and~~ single stranded DNA (ssDNA), desmogleins, desmoplakins, antigens found on heart muscle, and antigens associated with immune complex kidney disease.

4. (Currently Amended) The AHP of Claim 1, wherein said antigen is selected from the group consisting of factor VIII, muscle acetylcholine receptor, cardiolipin, platelet associated proteins, antigens associated with Sjogren's Syndrome, double stranded deoxyribonucleic acid (dsDNA), ~~and~~ single stranded DNA (ssDNA), desmogleins, desmoplakins, antigens found on heart muscle, and antigens associated with immune complex kidney disease.

5. (Canceled).

6. (Withdrawn-Currently Amended) A method for treating an autoimmune disease comprising the ~~steps~~ step of[[:]]

[[1)]] administering to a human or non-human primate a clinically effective amount of an antigen-based heteropolymer (AHP) [[AHP]], said AHP comprising (a) a monoclonal antibody that specifically binds a complement receptor (CR1) site on a primate erythrocyte, and (b) an antigen specific for a target pathogenic antibody or autoantibody, wherein said monoclonal antibody is crosslinked to [[an]] said antigen ~~specific for a target pathogenic antibody or autoantibody~~

~~2) allowing said AHP to bind to at least one competing CR1 site and to said pathogenic antibody or autoantibody; and~~

~~3) permitting said bound AHP to be cleared from circulation of said human or non human primate~~.

7. (Canceled).

8. (Withdrawn-Currently Amended) The AHP of Claim 6, wherein the target antibody or autoantibody is selected from the group consisting of antibodies or autoantibodies to the following antigens: factor VIII, muscle acetylcholine receptor, cardiolipin, platelet associated proteins, antigens associated with Sjogren's Syndrome, double stranded deoxyribonucleic acid (dsDNA), [[and]] single stranded DNA (ssDNA), desmogleins, desmoplakins, antigens found on heart muscle, and antigens associated with immune complex kidney disease.

9. (Withdrawn-Currently Amended) The AHP of Claim 6, wherein said antigen is selected from the group consisting of factor VIII, muscle acetylcholine receptor, cardiolipin, platelet associated proteins, antigens associated with Siogren's Syndrome, double stranded deoxyribonucleic acid (dsDNA), [[and]] single stranded DNA (ssDNA), desmogleins, desmoplakins, antigens found on heart muscle, and antigens associated with immune complex kidney disease.

10. (Withdrawn) The method of Claim 6, wherein the AHP is administered intravenously to

a human or non-human primate in a clinically effective amount.

11. (Withdrawn) The method of Claim 10, wherein said AHP is administered intravenously to a human in a clinically effective amount of 1-10 mg.

12. (Withdrawn) The method of Claim 6, wherein said administration of said clinically effective amount of AHP is repeated until the pathogenic antibody or autoantibody is completely cleared from circulation of said human or non-human primate.

13. (Withdrawn) The method of Claim 6, wherein said target pathogenic antibody or autoantibody is cleared from a circulatory system of a primate and said primate erythrocyte is recirculated through the circulatory system.

14. (Withdrawn-Currently Amended) A method for treating an autoimmune disease comprising the ~~steps~~ step of[[:]]

[[1)]] administering to a human or non-human primate an effective amount of an AHP cocktail comprising at least two [[AHPs]] antigen-based heteropolymers (AHPs), wherein each AHP comprises (a) a monoclonal antibody that specifically binds a complement receptor (CR1) site on a primate erythrocyte, and (b) an antigen specific for a target pathogenic antibody or autoantibody, wherein said monoclonal antibody is crosslinked to [[an]] said antigen ~~specific for a target pathogenic antibody or autoantibody;~~

~~2) allowing said AHP cocktail to bind to at least one competing CR1 site and to said pathogenic antibody or autoantibody; and~~

~~3) permitting said bound AHP cocktail to be cleared from circulation of said human or non-human primate~~.

15. (Withdrawn-Currently Amended) A method for treating an autoimmune disease comprising the steps of:

1) franking human or non-human primate erythrocytes with an [[AHP]] antigen-based heteropolymer (AHP), said AHP comprising (a) a monoclonal antibody that

specifically binds a complement receptor (CR1) site on a primate erythrocyte, and (b) an antigen specific for a target pathogenic antibody or autoantibody, wherein said monoclonal antibody is crosslinked to [[an]] said antigen ~~specific for a target pathogenic antibody or autoantibody~~; and

2) administering to a human or non-human primate a clinically effective amount of the AHP-franked erythrocytes[[;]]

~~3) allowing said franked AHP to bind to said pathogenic antibody or autoantibody; and~~

~~4) permitting said bound AHP to be cleared from circulation of said human or non-human primate~~.

16. (Withdrawn-Currently Amended) A method of detecting the presence of an auto-antibody in a primate, said method comprising the steps in the order stated:

(a) contacting a primate plasma sample containing erythrocytes with a composition comprising an [[AHP]] antigen-based heteropolymer (AHP), said AHP comprising (a) a monoclonal antibody that specifically binds a complement receptor (CR1) site on a primate erythrocyte, and (b) an antigen specific for an autoantibody, wherein said monoclonal antibody is crosslinked to [[an]] said antigen ~~specific for an auto-antibody~~; and

(b) detecting binding of the auto-antibody in the sample to the AHP bound to the primate erythrocyte.

17. (Withdrawn) The method of Claim 16, wherein the detecting step comprises the following steps in the order stated:

(a) separating the erythrocytes from the soluble plasma components; and

(b) contacting the erythrocytes with a labeled secondary antibody specific for the auto-antibody.

18-19. (Canceled)

20. (New) The method of claim 6, further comprising the steps of:

i) allowing said AHP to bind to at least one competing CR1 site and to said pathogenic antibody or autoantibody; and

ii) permitting said bound AHP to be cleared from circulation of said human or non-human primate.

21. (New) The method of claim 14, further comprising the steps of:

i) allowing said AHP cocktail to bind to at least one competing CR1 site and to said pathogenic antibody or autoantibody; and

ii) permitting said bound AHP cocktail to be cleared from circulation of said human or non-human primate.

22. (New) The method of claim 15, further comprising the steps of:

3) allowing said franked AHP to bind to said pathogenic antibody or autoantibody; and

4) permitting said bound AHP to be cleared from circulation of said human or non-human primate.